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EXAMINER	
MEHRPOUR, NAGHMEH	

ART UNIT	PAPER NUMBER
2686	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/753,266	UHLIK ET AL.	
	Examiner	Art Unit	
	Naghmeh Mehrpour	2686	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *15 April 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-91* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-91* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-6, 16, 22, 24-27, 34-37, 40-46, 57-69, 80-85, are rejected under 35 U.S.C. 103(a) as being unpatentable over Shin et al. (US Patent Number 5,687,171) in view of Ranta (US Publication 2002/0044564 A1)

Regarding claims 1, 16, 41, 60, 85, Shin teaches a method/apparatus of operating a base station comprising:

receiving a request for a traffic channel of a plurality of channels on a first random traffic channel of the plurality of traffic channels the traffic channels to be selectively allocated by the base station for communication with a user terminal (see figure 2, S103, col 3 lines 41-54);

determining whether a traffic channel of the plurality of traffic channels is available to allocate to the requestor (see figure 2, S104, col 4 lines 1-10); and

communicating to the requestor whether a channel of the plurality of channels available(see figure 2, S105, S106, col 5 lines 1-13). Shin does not specifically mention that receiving a random access request for a traffic channel. However, Ranta teaches receiving a random access request for a traffic channel (0002, 0031). Therefore, it would have been obvious

to one of ordinary skill in the art at the time of the invention to combine the above teaching of Ranta with Shin, in order to enable the user to convey fast signaling messages between mobile and base station.

Regarding claims 2, 42, Shin teaches a method wherein Communicating includes denying the request for a channel (See figure 1 S106, col 4 lines 1-10).

Regarding claims 3, 22, 25, 43, 61, 83-84, Shin teaches a method wherein Communicating includes granting the request for a channel by assigning the first channel (see figure 1, S105, col 4 lines 1-11).

Regarding claims 4, 24, 27, 44, 58, Shin teaches a method wherein Communicating includes granting the request for a channel by assigning a second channel and the first channel (see figure 2, S105, on second time). In step S101, the control unit (105) of a base station reads the strength of a signal that has been measured and provided at an output of the unit(102)for measuring the strength of a signal received during an interval that is shorter than that requested by a call. In step S102, the margin allowed for signal strength is calculated by subtracting the size of a received signal that has been read from the total interferences allocated by the network. In step S103, the evaluation on whether a new radio channel has been requested is made and if not, step S101 is carried out. If the evaluation result shows that a request has been made, the operation proceeds to step S104. In step S104 an evaluation is made on whether the signal strength required for allocating radio channels according to the channel request made in step

S103 exceeds the limit of the margin calculated in step S102. If the evaluation result shows that the margin is more than the required power strength in step S104,the allocation request of a corresponding radio channel is allocated in step S105, first channel is assigned. The base station start back to "A", and go through the whole procedures again, and When the evaluation result shows that the margin is more than the required power strength in step S104, in step S105 allocate the second channel also (col 3 lines 42-54, col 4 lines 1-14).

Regarding claims 5, 26, 45, 23, Shin inherently teaches a method wherein communicating includes granting the request for a channel by assigning a second channel instead of the first channel (see figure 2). In step S101, the control unit (105) of a base station reads the strength of a signal that has been measured and provided at an output of the unit(102)for measuring the strength of a signal received during an interval that is shorter than that requested by a call. In step S102, the margin allowed for signal strength is calculated by subtracting the size of a received signal that has been read from the total interferences allocated by the network. In step S103, the evaluation on whether a new radio channel has been requested is made and if not, step S101 is carried out. If the evaluation result shows that a request has been made, the operation proceeds to step S104. In step S104 an evaluation is made on whether the signal strength required for allocating radio channels according to the channel request made in step S103 exceeds the limit of the margin calculated in step S102. If the evaluation result shows that the margin is less than the required power strength in step S104,the allocation request of a corresponding radio channel is rejected in step S106, first channel is rejected. The base station start back to "A" and go through the whole procedures again, and When the evaluation result

shows that the margin is more than the required power strength in step S104, in step S105 allocate the second channel (col 3 lines 42-54, col 4 lines 1-14).Therefore, the second channel allocated instead of the first channel.

Regarding claims 6, 46, 59, 69, 82, shin teaches a method/machine-readable medium (base station is a machine readable medium) embodying instruction, the instructions, when executed by a processor (see figure 2, 104), causing the processor to perform a method (see figures 1-2, col 2 lines 66-67, col 3 lines 1-12),wherein determining includes evaluating a load of the system (col 3 lines 15-23).

Regarding claim 21, Shin inherently teaches a method wherein the indication signaling no channel is available. In step S101, the control unit (105) of a base station reads the strength of a signal that has been measured and provided at an output of the unit(102) for measuring the strength of a signal received during an interval that is shorter than that requested by a call. In step S102, the margin allowed for signal strength is calculated by subtracting the size of a received signal that has been read from the total interferences allocated by the network. In step S103,the evaluation on whether a new radio channel has been requested is made and if not, step S101 is carried out. If the evaluation result shows that a request has been made, the operation proceeds to step S104.In step S104 an evaluation is made on whether the signal strength required for allocating radio channels according to the channel request made in step S103 exceeds the limit of the margin calculated in step S102. If the evaluation result shows, the margin is less than the required power strength in step S104,the allocation request of a

corresponding radio channel is rejected in step S106. Therefore, first channel rejected. The base station start back to "A", and go through the whole procedures again, and When the evaluation result shows that the margin is less than the required power strength in step S104 again, in step S106 rejects the second channel too (col 3 lines 42-54, col 4 lines 1-14). If the evaluation result shows, the margin is less than the required power strength in step S104,the allocation request of a corresponding third radio channel is rejected in step S106. Therefore third channel is not available either. The base station keep going back to the starting point "A' again till all the channels in the channel lists are checked, if the evaluation results shows that the margin is less that the required power strength in step S104, for every channels in the lists, then no channel is available.

Regarding claims 34, 36, Shin inherently teaches a method of providing access to a network comprising:

receiving a request for access on a first channel of a plurality of channels at random from a network subscriber(see figure 2, S103, col 3 lines 41-54), each channel of the plurality of channels suitable for accessing the network (col 5 lines 1-3,in a mobile communication system, users usually randomly select a channel from plurality of the available channels, in order to access to the network); and

granting access to the network on a channel of the plurality of channels based on an evaluation of factors (see figure 2, S105, S106, col 5 lines 1-13).

Regarding claims 40, 57, 80, Shin teaches a method/machine-readable medium (base station is a machine readable medium) embodying instruction, the instructions, when executed by a processor (see figure 1, 104), causing the processor to perform a method (see figure 1, col 2 lines 66-67, col 3 lines 1-12), wherein determining includes evaluating the radio frequency characteristics of the request (col 3 lines 1-41). Shin evaluating the characteristic channel (each frequency contains number of channels).

Regarding claim 63, Shin teaches a system comprising:

a processor (see figure 1, 104A, 1104B, 104N); and

a network interface coupled to the processor;

wherein the processor and the network interface are collectively configured to:

receive a request for a channel of a plurality of channels on a first channel of the plurality of channels (see figure 2, S103, col 3 lines 42-54);

determine whether a channel of a plurality of channels is available (see figure 2, S104, col 4 lines 1-9); and

communicate to the requestor whether a channel of the plurality of channels is available (see figure 2, col 4 lines 1-10).

Regarding claims 64, Shin teaches a machine-readable medium (base station is a computer) embodying instruction, the instructions, when executed by a processor, causing the processor to perform a method (see figure 1, col 2 lines 66-67, col 3 lines 1-12), the method comprising:

receiving a request for a channel of a plurality of channels on a first channel of the plurality of channels (see figure 2, S103, col 3 lines 41-54);

determining whether a channel of the plurality of channels is available (see figure 2, S104, col 4 lines 1-10); and

communicating to the requestor whether a channel of the plurality of channels available(see figure 2, S105, S106, col 5 lines 1-13).

Regarding claims 65, 81, Shin teaches a machine-readable medium (base station is a computer) embodying instruction, the instructions, when executed by a processor, causing the processor to perform a method (see figure 1, col 2 lines 66-67, col 3 lines 1-12), the method comprising: wherein Communicating includes denying the request for a channel (See figure 2 S106, col 4 lines 1-10).

Regarding claims 66, teaches a machine-readable medium (base station is a computer) embodying instruction, the instructions, when executed by a processor, causing the processor to perform a method (see figure 1, col 2 lines 66-67, col 3 lines 1-12),the method comprising:

granting the request for a channel by assigning the first channel(see figure 2, S105 col 4 lines 1-9).

Regarding claim 67, Shin a machine-readable medium (base station is a computer) embodying instruction, the instructions, when executed by a processor, causing the processor to perform a method (see figure 1, col 2 lines 66-67, col 3 lines 1-12), the method comprising:

granting the request for a channel by assigning a second channel and the first channel (see figure 2, S105, on second time). In step S101, the control unit (105) of a base station reads the strength of a signal that has been measured and provided at an output of the unit(102)for measuring the strength of a signal received during an interval that is shorter than that requested by a call. In step S102, the margin allowed for signal strength is calculated by subtracting the size of a received signal that has been read from the total interferences allocated by the network. In step S103, the evaluation on whether a new radio channel has been requested is made and if not, step S101 is carried out. If the evaluation result shows that a request has been made, the operation proceeds to step S104. In step S104 an evaluation is made on whether the signal strength required for allocating radio channels according to the channel request made in step S103 exceeds the limit of the margin calculated in step S102. If the evaluation result shows that the margin is more than the required power strength in step S104,the allocation request of a corresponding radio channel is allocated in step S105, first channel is assigned. The base station start back to "A", and go through the whole procedures again, and When the evaluation result shows that the margin is more than the required power strength in step S104, in step S105 allocate the second channel also (col 3 lines 42-54, col 4 lines 1-14).

Regarding claim 68, Shin teaches a machine-readable medium (base station is a computer) embodying instruction, the instructions, when executed by a processor, causing the processor to perform a method (see figure 1, col 2 lines 66-67, col 3 lines 1-12), the method comprising:

granting the request for a channel by assigning a second channel instead of the first channel(see figure 2). In step S101, the control unit (105) of a base station reads the strength of

a signal that has been measured and provided at an output of the unit(102)for measuring the strength of a signal received during an interval that is shorter than that requested by a call. In step S102, the margin allowed for signal strength is calculated by subtracting the size of a received signal that has been read from the total interferences allocated by the network. In step S103, the evaluation on whether a new radio channel has been requested is made and if not, step S101 is carried out. If the evaluation result shows that a request has been made, the operation proceeds to step S104. In step S104 an evaluation is made on whether the signal strength required for allocating radio channels according to the channel request made in step S103 exceeds the limit of the margin calculated in step S102. If the evaluation result shows that the margin is less than the required power strength in step S104,the allocation request of a corresponding radio channel is rejected in step S106, first channel is rejected. the base station start back to "A", and go through the whole procedures again, and When the evaluation result shows that the margin is more than the required power strength in step S104, in step S105 allocate the second channel (col 3 lines 42-54, col 4 lines 1-14).

Regarding claims 35, 37, 62, Shin teaches a method wherein the evaluation factors include subscriber status, subscriber equipment network loading (col 2 lines 15-20). Shin does not specifically mention that factors including type of service requested, geographic location of the request, geographic location of the responding equipment, connection quality, usage history of the subscriber, and emergency status of the request. However, Examiner takes official notice that a communication method wherein the evaluation factors include subscriber status, subscriber equipment, type of service requested, geographic location of the request, geographic location of

the responding equipment, connection quality, usage history of the subscriber, and emergency status of the request are well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the above teaching with Shin, in order to provide a system that is useful for different variety purpose, while the quality of the signals improving as well system.

3. Claims 7-8, 11, 18, 47-48, 51, 70-71, 74, are rejected under 35 U.S.C. 103(a) as being unpatentable over Shin et al. (US Patent Number 5,687,171) in view of Ranta (US Publication 2002/0044564 A1 and further in view of Wheeler et al. (US Patent Number 2002/0072348 A1).

Regarding claims 7, 18, 47, 70, Shin teaches a method/machine-readable medium (base station is a machine readable medium) embodying instruction, the instructions, when executed by a processor (see figure 1, 104), causing the processor to perform a method (see figure 1, col 2 lines 66-67, col 3 lines 1-12). Shin modified by Ranta fails to teach a method wherein determining includes evaluating an emergency status of the request. However Wheeler teaches a method wherein determining includes evaluating an emergency status of the request (page 2 sections 0013-0014). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the above teaching of Wheeler with Shin modified by Ranta, in order to enable the user to register automatically in response to the a notification message.

Regarding claims 8, 48, 71, Shin teaches a method/machine-readable medium (base station is a machine readable medium) embodying instruction, the instructions, when executed by a

processor (see figure 1, 104), causing the processor to perform a method (see figure 1, col 2 lines 66-67, col 3 lines 1-12). Shin modified by Ranta fails to teach a method wherein determining includes evaluating a status of a subscriber from whom the request originates subscriber. However Wheeler teaches a method wherein determining includes evaluating a status of a subscriber from whom the request originates subscriber (page 1 section 0008). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the above teaching of Wheeler with Shin modified by Ranta, in order to enable the user to register automatically in response to the a notification message.

Regarding claims 11, 51, 74, Shin teaches a method/machine-readable medium (base station is a machine readable medium) embodying instruction, the instructions, when executed by a processor (see figure 1, 104), causing the processor to perform a method (see figure 1, col 2 lines 66-67, col 3 lines 1-12). Shin modified by Ranta fails to teach a method wherein determining includes evaluating a nature of the request. However Wheeler teaches a method wherein determining includes evaluating a nature of the request (page 1 section 0011). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the above teaching of Wheeler with Shin modified by Ranta, in order to enable the user to register automatically in response to the a notification message.

4. Claims 9-10, 39, 49-50, 56, 72-73, 79, are rejected under 35 U.S.C. 103(a) as being unpatentable over Shin et al. (US Patent Number 5,687,171) in view of Ranta (US Publication 2002/0044564 A1) in further view of Castanho et al. (US Patent Number 2002/0087740 A1).

Regarding claims 9, 49, 72, Shin teaches a method/machine-readable medium (base station is a machine readable medium) embodying instruction, the instructions, when executed by a processor (see figure 1, 104), causing the processor to perform a method (see figure 1, col 2 lines 66-67, col 3 lines 1-12). Shin modified by Ranta fails to teach a method wherein evaluating the status includes evaluating the subscription terms of the subscriber. However Castanho teaches a method wherein evaluating the status includes evaluating the subscription terms of the subscriber (page 2 section 0023). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the above teaching of Castanho with Shin modified by Ranta, in order to enable the user to register automatically in response to the a notification message.

Regarding claims 10, 39, 50, 56, 73, 79, Shin teaches a method/machine-readable medium (base station is a machine readable medium) embodying instruction, the instructions, when executed by a processor(see figure 1 104), causing the processor to perform a method (see figure 1, col 2 lines 66-67, col 3 lines 1-12). Shin modified by Ranata fails to teach a method wherein evaluating the status includes evaluating the payment history and usage history of the subscriber (page 2 section 0035). However Castanho teaches a method wherein evaluating the status includes evaluating the payment history and usage history of the subscriber. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the above teaching of Castanho with Shin modified by Ranta, in order to notify roaming subscribers of suitable providers and their associated tariff rates when operating in an unfamiliar location.

5. Claims 12-14, 52-53, 75-76, are rejected under 35 U.S.C. 103(a) as being unpatentable over Shin et al.(US Patent Number 5,687,171) and Ranta (US Publication 2002/0044564 A1) in view of Mittal et al. (US Patent Number 2003/0163393A1).

Regarding claims 12, 52, 75, Shin teaches a method/machine-readable medium (base station is a machine readable medium) embodying instruction, the instructions, when executed by a processor (see figure 1, 104), causing the processor to perform a method (see figure 1, col 2 lines 66-67, col 3 lines 1-12). Shin modified by Ranta fails to teach a method wherein the nature of the request includes a high bandwidth requirement. However Mittal teaches a method wherein the nature of the request includes a high bandwidth requirement (page 6 section 0071, page 9 section 0098). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the above teaching of Mittal with Shin modified by Ranta, in order to enable the user to have complete control over the network by obtaining successful interface according to frequency platform.

Regarding claims 13, 53, 76, Shin teaches a method/machine-readable medium (base station is a machine readable medium) embodying instruction, the instructions, when executed by a processor (see figure 1,104), causing the processor to perform a method (see figure 1, col 2 lines 66-67, col 3 lines 1-12). Shin modified by Ranta fails to teach a method wherein a nature of the request includes a low bandwidth requirement. However Mittal teaches a method wherein the nature of the request includes a low bandwidth requirement (page 6 section 0071, page 9 section

0099). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the above teaching of Mittal with Shin modified by Ranta, in order to enable the user to have complete control over the network by obtaining successful interface according to frequency platform.

Regarding claims 14, 19, 54, 77, Shin teaches a method/machine-readable medium (base station is a machine readable medium) embodying instruction, the instructions, when executed by a processor (see figure 1, 104), causing the processor to perform a method (see figure 1, col 2 lines 66-67, col 3 lines 1-12). Shin modified by Ranta fails to teach a method wherein a nature of the request includes a set of capabilities of equipment used to make the request. However Mittal teaches a method wherein the nature of the request includes a high bandwidth requirement (page 4 section 0042, page 6 section 0071). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the above teaching of Mittal with Shin modifdied by Ranta, in order to enable the user to have complete control over the network by obtaining successful interface according to device platform.

6. Claims 15, 55, 78, are rejected under 35 U.S.C. 103(a) as being unpatentable over Shin et al.(US Patent Number 5,687,171) and Ranta (US Publication 2002/0044564 A1) in view of Robinson (US Patent Number 5,680,398).

Regarding claims 15, 55, 78, Shin teaches a method/machine-readable medium (base station is a machine readable medium) embodying instruction, the instructions, when executed by a

processor (see figure 1, 104), causing the processor to perform a method (see figure 1, col 2 lines 66-67, col 3 lines 1-12). Shin modified by Ranta fails teaches a method further comprising:

receiving a request for a third channel of the plurality of channels upon assigning of the first channel;

determining whether a third or fourth channel of the plurality of channels is available (see figure 2, S014); and

communicating to the requestor the third channel availability or fourth channel availability. However Robinson teaches comprising:

receiving a request for a third channel of the plurality of channels upon assigning of the first channel;

determining whether a third or fourth channel of the plurality of channels is available (see figure 2, S014); and communicating to the requestor the third channel availability or fourth channel availability (col 6 lines 57-64). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the above teaching of Robinson with Shin modified by Ranta, in order to obtain the optimum traffic channel for use as signaling channel for improving random access communications system.

7. Claims 17, 38, are rejected under 35 U.S.C. 103(a) as being unpatentable over Shin et al. (US Patent Number 5,687,171) and Ranta (US Publication 2002/0044564 A1) in view of Miller et al. (US Patent Number 6,006,084).

Regarding claim 17, Shin modified by Ranta fails to teach a method wherein a request including a subscriber/an equipment identification. However Miller teach a method wherein a request including a subscriber/an equipment identification (col 14 lines 44-52). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the above teaching of Miller with Shin modified by Ranta, in order to enable the service provider to have accurate billing information for individual members.

Regarding claim 38, Shin modified by Ranta fails to teach a method wherein the request includes information related to equipment used by a subscriber making the request. However Miller teach a method wherein a request including a subscriber/equipment identification (col 14 lines 44-52). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the above teaching of Miller with Shin modified by Ranta, in order to enable the service provider to have accurate billing information for individual members.

8. Claim 20, is rejected under 35 U.S.C. 103(a) as being unpatentable over Shin et al. (US Patent Number 5,687,171) and Ranta (US Publication 2002/0044564 A1) in view of Barany et al. (US Patent Number 2002/0065081).

Regarding claim 20, Shin modified by Ranta fails to teach a method wherein the request including a training sequence. However Barany teaches a communication system that Mobile request including a training sequence (page section 0071, section 0072). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the above

teaching of Barany with Shin modified by Ranta, in order to enable the mobile to use different system with different protocols.

9. Claims 28-29, 30-31, are rejected under 35 U.S.C. 103(a) as being unpatentable over Shin et al. (US Patent Number 5,687,171) and Ranta (US Publication 2002/0044564 A1) in view of Buchenhorner et al. (US Patent Number 5,345,5496).

Regarding claims 28, 30, Shin modified by Ranta fails to teach a method comprising:

sending a request for a third channel of the plurality of channels;

receiving an indication of availability of a channel of the plurality of channels. However Buchenhorner teaches a method establishing a communication link comprising:

sending a request for a third channel of the plurality of channels (col 4 lines 1-2);

receiving an indication of availability of a channel of the plurality of channels (col 4 lines 2-12). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the above teaching of Buchenhorner with Shin modified by Ranta, in order to obtain the optimum traffic channel for use as signaling channel thus base station grants the communication channel is greatly enhanced.

Regarding claim 29, Shin modified by Ranta fails to teach a method comprising:

the indication signaling the third channel is not available. However Buchenhorner teaches a method establishing a communication link comprising:

the indication signaling the third channel is not available (col 4 lines 1-8). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to

combine the above teaching of Buchenhorner with Shin, in order to obtain the optimum traffic channel for use as signaling channel, thus base station grants of the communication channel is greatly enhanced.

Regarding claim 31, Shin fails to teach a method comprising:

the indication signaling the fourth channel is available. However Buchenhorner teaches a method establishing a communication link comprising:

the indication signaling the fourth channel is available (col 3 lines 60-68, col 4 lines 1-3). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the above teaching of Buchenhorner with Shin modified by Ranta, in order to obtain the optimum traffic channel for use as signaling channel, thus base station grants of the communication channel is greatly enhanced.

10. Claims 32-33, are rejected under 35 U.S.C. 103(a) as being unpatentable over Shin et al. (US Patent Number 5,687,171), Ranta (US Publication 2002/0044564 A1) and Barany et al. (US Patent Number 2002/0065081) in view of Robinson (US Patent Number 5,680,398).

Regarding claim 32, the combination of Shin, Ranta, and Barany fails to teach a method further comprising: waiting an inter-channel delay;

sending a request for a third channel of the plurality of channels on the third channel;

receiving an indication of availability of a channel of the plurality channels. However Robinson teaches a method comprising:

waiting an inter-channel delay (col 5 lines 44-54);

sending a request for a third channel (channel 103) of the plurality of channels on the third channel (see figure 2, col 5 lines 55-63);

receiving an indication of availability of a channel of the plurality channels (channels 101, 103, col 5 lines 64-67, col 6 lines 1-11). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the above teaching of Robinson with Shin modified by Ranta and Barany, in order to obtain the optimum traffic channel for use as signaling channel for improving random access communications system.

Regarding claim 33, Shin modified by Ranta and Barany fails to teach a method wherein:

the indication signaling the third channel is not available;

determining no other channels may be requested;

waiting an inter-attempt delay; and

sending a request for the first channel on the first channel.

However Robinson teaches the indication signaling the third channel is not available, due to the colliding units (col 6 lines 12-16); and determining no other channels may be requested (col 6 lines 12-16);

waiting an inter-attempt delay (col 6 lines 16-18); and

sending a request for the first channel on the first channel (col 6 lines 12-20). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the above teaching of Robinson with Shin modified by Ranta and Barany, in order to obtain the

optimum traffic channel for use as signaling channel for improving random access communications system.

11. Claims 86-91, are rejected under 35 U.S.C. 103(a) as being unpatentable over Shin et al. (US Patent Number 5,687,171), Ranta (US Publication 2002/0044564 A1) in view of Schein et al. (US Publication Number 2003/0133426).

Regarding claims 86, 88, 90, Shin modified by Ranta fails to teach a method further comprising calculating a set of spatial multiplexing weights and a set of spatial demultiplexing weights associated with the request. However, Schein teaches a method further comprising calculating a set of spatial multiplexing weights and a set of spatial demultiplexing weights associated with the request (page 2 section 0020). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the above teaching of Schein with Shin modified by Ranta, in order to reduce the interference caused by the broadcast channel.

Regarding claims 87, 89, 91, Shin modified by Ranta fails to teach a method wherein communicating to the requestor includes using the set of spatial multiplexing weights to tailor a multi-lobe antenna radiation pattern. However, Schein teaches a method wherein communicating to the requestor includes using the set of spatial multiplexing weights to tailor a multi-lobe antenna radiation pattern (page 2 section 0020) Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the above teaching of Schein with Shin modified by Ranta, in order to reduce the interference caused by the broadcast channel.

Response to Arguments

12. Applicant's arguments with respect to claims 1-91, have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Youssfmir et al. (US Patent 6,795,409) disclose cooperative polling in a wireless data communication system having smart antenna processing

14. **Any responses to this action should be mailed to:**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Naghmeh Mehrpour whose telephone number is 571-272-7913. The examiner can normally be reached on 8:00- 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold be reached (571) 272-7905.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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NM

August 10, 2005

MELODY MEHRPOUR
PATENT EXAMINER